AUTOMATIC IDENTIFICATION TECHNOLOGY (AIT)

MARINE CORPS TACK-ON

26 April 2007

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LPD-3

Agenda

- **Overarching Information**
- **Policy**
- **TRANSCOM Responsibility**
- **Active Radio Frequency Identification (aRFID)**
- **Passive Radio Frequency Identification (pRFID)**

AIT Definition - Interpretation

AIT: a suite of technologies (bar codes, optical memory card (OMC), radio frequency identification (RFID), contact memory button (CMB), and integrated circuit card that enables the automatic capture of source data, thereby enhancing the ability to identify, track, document, and control deploying and redeploying forces, equipment, personnel and sustainment cargo.

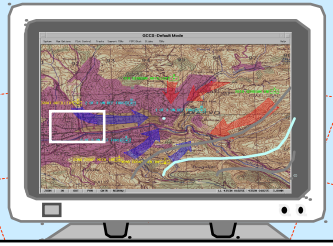
AIT Leads: The application of putting data onto or represented by an AIT media (i.e., printing the bar codes on the MSL).

Business Process Owners: The application/process of extracting information from an AIT media to satisfy a particular business process event (i.e., scanning MSL).

Information Flow Hierarchy

Presentation Layer

Battlespace Situational Awareness



GCCS COP
Combat Support Enabled

Process Layer

Global Information Applications

JTAV

JOPES

GTN

GCSS-MC SDE

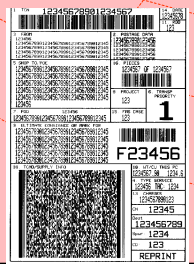
GCSS-MC satisfies JTAV, DRID 54, GCSS Capstone Document

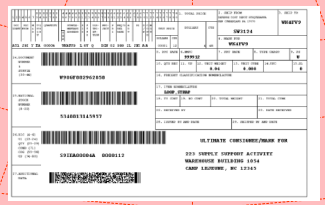
GCSS-MC SDE Satisfies CoCOM 129, TAV, ITV

Mission Applications

Data Layer

Source Data Collection





UID/RFID policy, DTR, MILSTDs 129/130, etc.

AIT Integration

TAV

SDE

Marking

OSD/DoD/DoN AIT Related Poli

✓ **DoD 4000.25-1-M; Military Standard Requisitioning and Issue Procedures (MILSTRIP)** - Requires linear and 2D bar codes on DD Form 1348-1A (Issue Release Receipt Document (IRRD))

✓ **DoD 4500.9-R-Part 2/3, Defense Transportation Regulation** – Requires a linear and 2D MSL for sustainment and unit move shipments entering the organic distribution system

✓ **OUSD (AT&L) memo 2 Oct 03 – Radio Frequency**

OSD/DoD/DoN AIT Related Pol

✓ **OUSD (AT&L) memo 2 Oct 03 – Radio Frequency Identification (RFID) Policy (Passive Tags)** - Requires suppliers to put passive RFID tags on lowest possible piece part/case/pallet packaging by Jan 05.

✓ **OUSD (AT&L) memo 29 July 2003, Policy for Unique Identification (UID) of Tangible Items – New Equipment, Major Modifications, and Reprocurements of Equipment and Spares.** The policy states that UID is a mandatory requirement for all property items delivered to the government if: (1) the acquisition cost is $5,000 or

OSD/DoD/DoN AIT Related Poli

✓ **SECNAVINST 7320.10A, Department of the Navy Personal**
Property Policies and Procedures - All personal property recorded in the personal property system shall be bar coded within seven days of receipt.

✓ **DoD 4140.1-R, DoD Materiel Management Regulation**
is being modified to include the requirement for pRFID for outbound shipments at the case/pallet level. The initial release will

USMC AIT Policy

MCO 4000.59, Draft AIT Policy

- ✓ Initial staffing: 11 Dec 06 - 26 Jan 07
- ✓ Second staffing: 21 Feb - 23 Mar 07
- Final staffing targeted: 20 Apr 07 - 11
- Signed MCO projected: 13 Jul 07

NAVMC AIT Directive

- Beginning the process for initial input.

TRANSCOM AIT Responsibilit

As the DoD lead functional proponent for RFID and related AIT implementation in the DoD supply chain, specifically active and passive RFID, satellite tracking technology, and linear and two-dimensional bar codes used in the supply chain processes, USTRANSCOM, in collaboration with national partners, will:

(1) Develop a concept of operations for RFID and related AIT, recommend policy changes, as appropriate, through the Defense Logistics Executive (DLE), and assess ongoing actions in "next generation" active and passive RFID technology and recommend a way forward.

(2) In conjunction with the Assistant Deputy Under Secretary for Supply Chain Integration, promote funding for RFID and synchronize RFID implementation across the Department.

TRANSCOM AIT Responsibilit

Draft AIT CONOPS - Provides high level fundamental
approach of how AIT could be used through the DTS

AIT Implementation Plan – Projected to have completed this Fall that would identify systems, communications, business processes, and other functional requirements needed to integrate AIT

Active RFID

Accomplishments to date:

- ✓ 77 Fixed Interrogator nodes installed USMC-wide
- ✓ Information systems enabled to burn tags
- ✓ RFID peripherals (readers/tags/interrogators/docking stations) delivered Marine Corps wide

On-going Efforts:

- ✓ Continue tagging our Maritime Preposition Ships over the next three years
- ✓ Incorporating RFID into Individual Training Standards

Active RFID

DoD Efforts:

- Tag Data Migration to International Standards - Changes include the migration of active RFID tag identifiers from the current 22-bit to a 32-bit coding sequence and incorporation of the ISO/IEC 15418 and ISO/IEC 15434 (a.k.a. MH10) data semantics/ syntax into the active RFID tag media. The time line for completion of required system modifications is approximately two years.

Passive RFID

- DoD will be an early adopter of innovative RFID technology that leverages the Electronic Product Code (ePC) and compatible RFID tags

- DFARS ruling (211.275-7006) governs the application of pRFID tagging at the case, pallet and UID item packaging level for all new solicitations delivered to DLA Distribution Depots and three Air Mobility Terminals

Passive RFID

On-going Efforts:

- ✓ Project #1: Testing pRFID technology into our freight (TMO) in-check process with DLA at Camp Lejeune
  (IOC projected Jun/Jul 07)

- ✓ Project #2: Integrating pRFID technology into our distribution process for last-tactical mile in-transit visibility with 3D MLG (IOC: TBD)

Garrison pRFID – CLNC TMO (Project #1)

~~MILS vs. DLMS Transactions~~

AS1 Advance Shipment Notice MILS Transaction - fixed length (80 positions)

- Cannot contain pRFID and IUID data

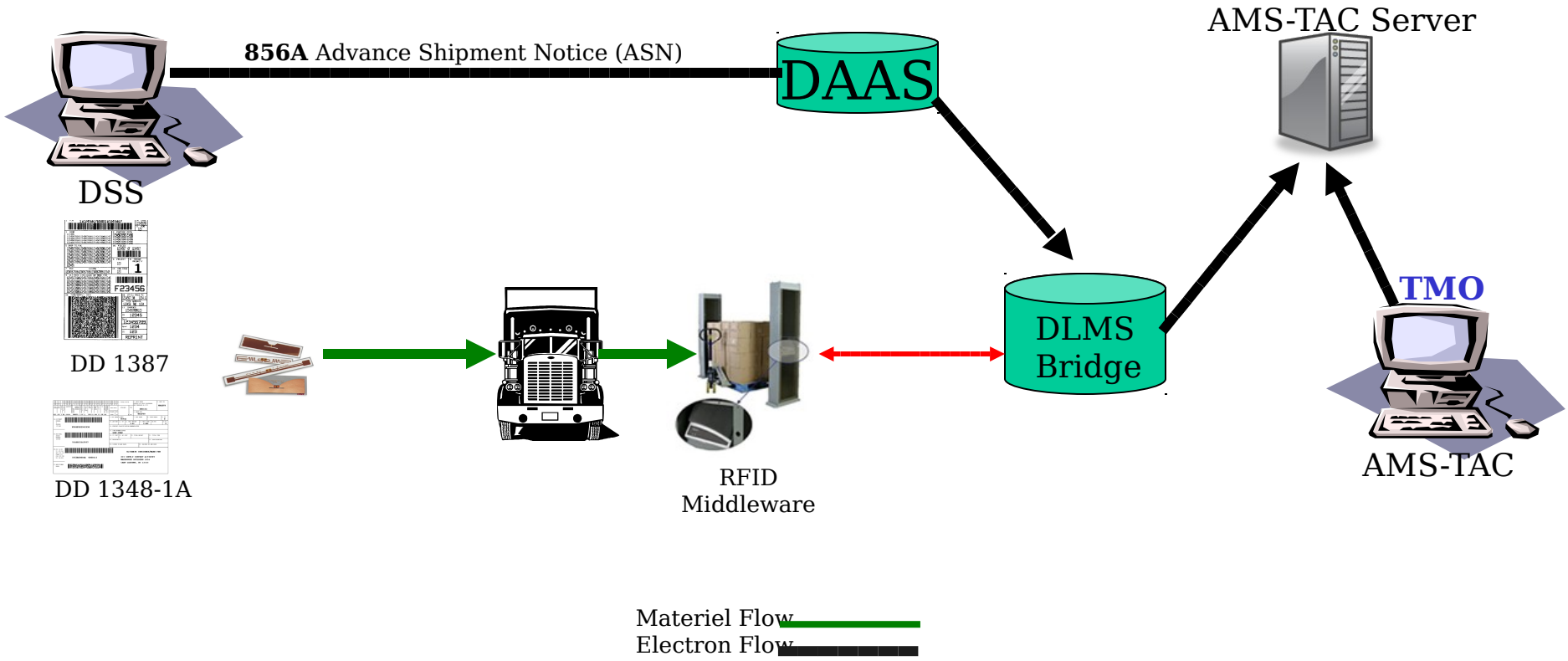
Example:
AS1S9IS5330011437458 SE00001V033655001XXXXA ANRA 005V0336550001XXXXAXXJ

856 Advance Shipment Notice DLMS Transaction - variable length

- Can contain pRFID and IUID data

EDI Example:
ST~856~1234~BSN~00~ZZ~20050101~1153~~AS~HL~1~~V~N1~SB~~M4~S9I~~FRN1~GP
~~M4~SHA~~TO~HL~2~~W~LIN~~FS~5330011437458~SN1~~1~SE~1~TD5~~~~J~REF~TG~
V033655001XXXXAXX~REF~TN~V033655001XXXX~~W8~~REF~FG~~~FU^NR~REF

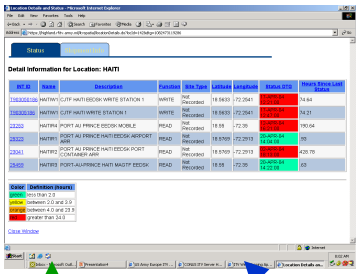
Garrison pRFID – CLNC TMO (Project #1)



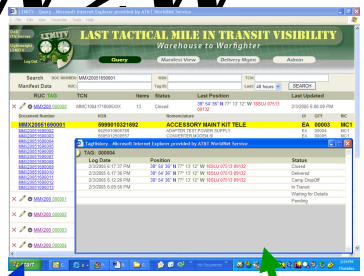
Can pRFID enhance materiel in-check?

Tactical aRFID Last Tactical Mile (LMT)

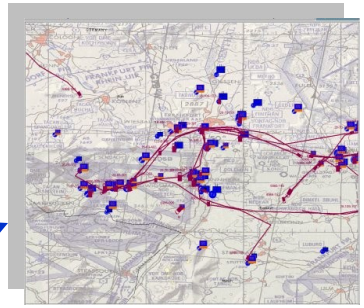
Warehouse-to-Warfighter "W2W"



RFID ITV Server



LTM Server



BCS3

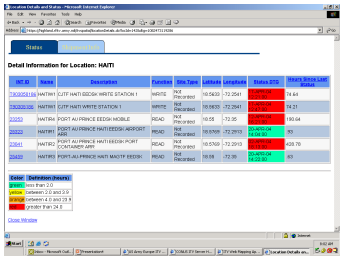
Key: 1928374

AMS-TAC

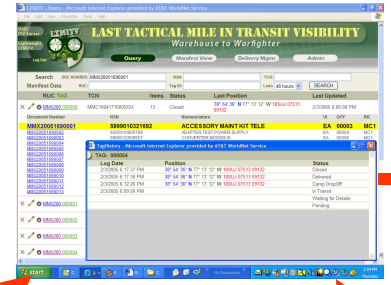
RFID Tag # is manua entered when buildin convoy and delivery drop

Issue: $70 tag used just for the tag serial number; interrogat for LTM. Convoy will have some type of GPS transpon

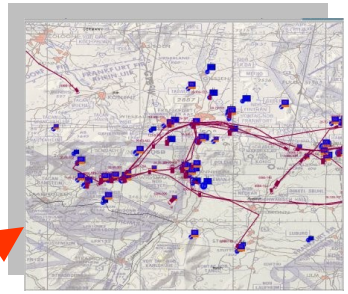
Tactical pRFID – LMT 3D MLG (Project #2)



RFID ITV Server

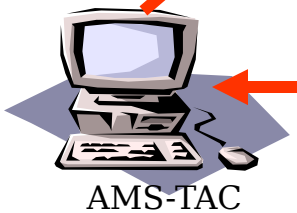


LTM Server

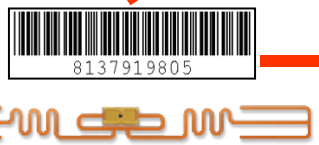


BCS3

Key: 00110110110011001100110001 – 96



AMS-TAC



Replace $70 tag with $.85 pRFID tag

Rqmt: All systems (AMS-TAC, RFID ITV Server, W2W Kit, LTM ITV Se and BCS3) must be modified to accept this new serial numbe

MARCORSYSCOM AIT Program

AIT Program Office Mission

Provide AIT hardware and software solutions and te
advice and assistance to enable more efficient, accu
capture in logistics, maintenance, or business proce
within the Marine Corps.

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Questions